

Unit
3

Written Practice Assessment



Part A

1. Give two special cases for the general pattern $y + y + x + x = (2 * y) + (2 * x)$.

2. Circle each statement below (a-d) that describes the special cases at the right.

a. Doubling a number is the same as adding it to itself.

b. $2 * a = 2 + 2$

c. $2 * a = b + c$

d. $2 * a = a + a$

$$2 * 5 = 5 + 5$$

$$2 * 1.4 = 1.4 + 1.4$$

$$2 * 8 = 8 + 8$$

You can use the formula $c = 2.54 * i$ to find length in centimeters (c) when length in inches (i) is known. Use this formula for Problems 3-5.

3. How many centimeters are there in 9 inches? _____
(unit)

4. How many centimeters are there in 10 inches? _____
(unit)

5. Circle the best estimate for the number of centimeters in 3 feet.

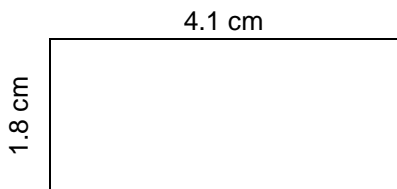
0.9

9.0

90

900

6. Use the formulas at the right to find the perimeter and area of the rectangle.



Perimeter of a rectangle

$$P = 2 * (b + h)$$

Area of a rectangle

$$A = b * h$$

a. Perimeter = _____
(unit)

a. Area = _____
(unit)

**Unit
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7. Evaluate each expression when $x = 4$.

a. $2.3 * 10^x$ _____

b. $x^3 + 2^x$ _____

c. $x * 10^{-6}$ _____

d. $x^0 + (-2)$ _____

8. Mr. Dixon used the spreadsheet at the right to record his students' scores on 3 geography quizzes. The mean score for the 3 quizzes appears in Column E.

	A	B	C	D	E
1	Student	Quiz 1	Quiz 2	Quiz 3	Mean
2	Aaron	60	70	80	70
3	Beth	100	85	91	92
4	Carlin	77	75	94	82
5	Denny	89	65	80	

a. Name the cell that contains Beth's score on quiz 3. _____

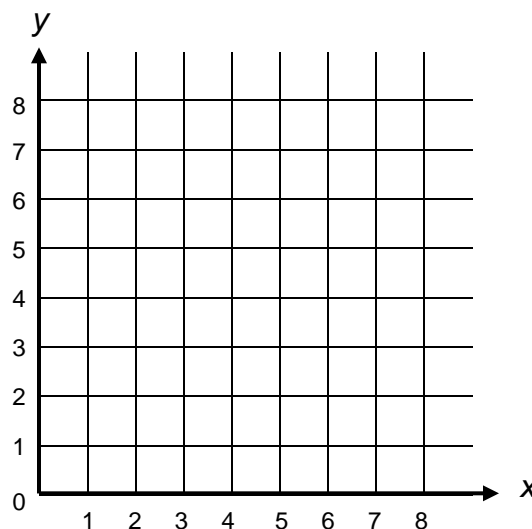
b. Calculate Denny's mean score and record it in cell E5.

c. Using cell names, write a formula for calculating the value in E5.

9. Complete the table for the given rule. Then plot and connect the points to make a line graph.

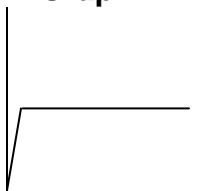
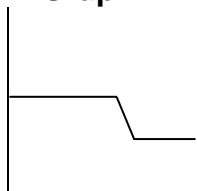
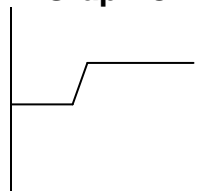
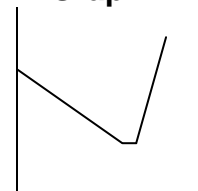
Rule: $y = (\frac{1}{2} * x) + 1$

in	out
x	y
	1
1	$1\frac{1}{2}$
3	
	4
8	



**Unit
3****Written Practice Assessment** *continued*

Each of the graphs represents one of the situations described below. Match each situation with its graph.

Graph A**Graph B****Graph C****Graph D**

10. A bicyclist riding on a level road and then uphill. Graph _____
11. A bicyclist riding on a level road and then downhill. Graph _____
12. A bicyclist accelerating at a constant rate and then going at a constant speed. Graph _____
13. A bicyclist riding up a hill and then down a hill. Graph _____

Part B

14. Rename each fraction as a mixed number or a whole number.

a. $\frac{16}{4}$ _____

b. $\frac{80}{12}$ _____

c. $\frac{19}{2}$ _____

d. $\frac{37}{5}$ _____

15. Rename each mixed number as a fraction.

a. $3\frac{1}{7}$ _____

b. $2\frac{2}{9}$ _____

c. $4\frac{6}{13}$ _____

d. $5\frac{1}{6}$ _____

16. Name the greatest common factor of each pair of numbers.

a. 6 and 24 _____

b. 61 and 62 _____



17. List the first 6 multiples of each number.

20 _____

80 _____

Name the least common multiple (LCM) of 20 and 80. _____

18. Use estimation to insert the decimal point in each quotient.

a. $189.6 \div 8 = 237$

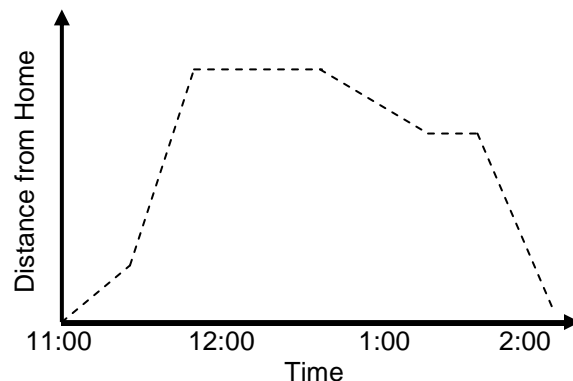
b. $1,402.08 \div 4.6 = 3048$

19. Multiply mentally.

a. $4.8 \times 10^7 =$ _____

b. $4.852 \times 10^{-3} =$ _____

20. Darcy rode her bike to the park, where she had a picnic with her friend Jenna. Then she rode her bike home.



Use the graph to tell a story about Darcy's bike ride.
